Elektronische Bauelemente

2SD1815

3A , 120V

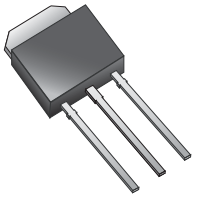
NPN Epitaxial Planar Silicon Transistor

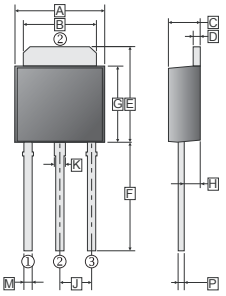
RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURES

- Low Collector-to-Emitter Saturation Voltage
- Excllent Linearity of hFE
- High fT
- Fast Switching Time

TO-251

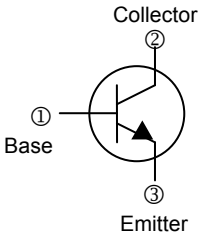




REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	6.35	6.80	G	5.40	6.25
B	4.90	5.50	H	0.85	1.50
C	2.15	2.40	J	2.30	
D	0.43	0.90	K	0.60	1.05
E	6.50	7.50	M	0.50	0.90
F	7.20	9.65	P	0.43	0.62

CLASSIFICATION OF h_{FE}

Product-Rank	2SD1815-Q	2SD1815-R	2SD1815-S
Range	70~140	100~200	140~280



ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Collector to Base Voltage	V_{CBO}	120	V
Collector to Emitter Voltage	V_{CEO}	100	V
Emitter to Base Voltage	V_{EBO}	6	V
Collector Current -Continuous	I_C	3	A
Collector Power Dissipation	P_C	1	W
Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-55 ~ 150	℃

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-base breakdown voltage	$V_{(BR)CBO}$	120	-	-	V	I_C=10μA, I_E=0
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	100	-	-	V	I_C=1mA, I_B=0
Emitter-base breakdown voltage	$V_{(BR)EBO}$	6	-	-	V	I_E=10μA, I_C=0
Collector cut-off current	I_{CBO}	-	-	1	μA	V_{CB}=100V, I_E=0
Emitter cut-off current	I_{EBO}	-	-	1	μA	V_{EB}=4V, I_C=0
DC current gain	h_{FE}	70	-	280		V_{CE}=5V, I_C=500mA
		40	-	-		V_{CE}=5V, I_C=2A
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-	0.4	V	I_C=1.5A, I_B=150mA
Base -emitter saturation voltage	$V_{BE(sat)}$	-	-	1.2	V	I_C=1.5A, I_B=150mA
Transition frequency	f_T	-	180	-	MHz	V_{CE}=10V, I_C=500mA
Collector Output Capacitance	C_{OB}	-	25	-	pF	V_{CB}=10V, I_E=0, f=1MHz
Turn-on time	t_{on}	-	100	-	nS	V_{CC}=50V, I_C=1.5A, I_{B1}= -I_{B2}= -0.15A
Storage time	t_S	-	900	-		
Fall time	t_f	-	50	-		

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CHARACTERISTIC CURVES